

App. Ser. No. 10/683,622
Reply to Office action of February 24, 2005

REMARKS/ARGUMENTS

In the February 24, 2005 Office Action, the Examiner acknowledged Applicant's election of species of Figure 2 including Claims 1-2 and 5-6 in the reply filed on January 6, 2005. The 5 Examiner objected to Claims 2 and 4 for informalities. Finally, the Examiner rejected Claims 1-2 and 5-6 under 35 USC § 102(b) as being anticipated by Maruyama et al. (U.S. Patent No. 6,249,135, "Maruyama"). Applicant has amended Claims 1-2 and 5-6 to further clarify the invention. Claims 1-2 and 5-6 are now pending of which Claim 1 is an independent claim. Applicant respectfully requests reconsideration of the patentability of the claims of the present application 10 in view of the amendments and the following remarks.

Election/Restriction

In the January 6, 2005 reply to the December 16, 2004 election/restriction requirement, Applicant elected to prosecute the species of Figure 2, with traverse. Applicant notes that the February 24, 2005 office action states that "Applicant's election without traverse . . . is acknowledged." (page 2, lines 1-2). Applicant respectfully submits that the quoted portion of the February 24, 2005 office action contains a typographical error. Thus, Applicant requests that the Examiner 15 confirm that the election in the January 6, 2005 reply was made with traverse.

Rejection Under 35 USC § 102(b)

Claim 1:

20 The Examiner rejected Claim 1 under 35 U.S.C. § 102(b) as being anticipated by Maruyama et al. (U.S. Patent No. 6,249,135; "Maruyama"), stating:

"As to claims 1, Maruyama et al disclose in figure 3 an apparatus for testing BGA having a printed circuit board (40), a socket slot (42) for holding a socket (10a) for testing an

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BGA (1) and a plurality of holding members (24a) for supporting BGA solder balls (2)." (Office Action, Page 2, lines 19-21).

Applicant respectfully traverses this rejection. Maruyama fails to disclose an apparatus
5 for testing ball grid arrays ("BGAs"). The apparatus comprises of "a socket slot in a printed circuit board for receiving a socket that is used for supporting BGA solder balls, wherein the BGA solder balls are supported by plural holding members of the socket and a via through the printed circuit board connects the BGA solder balls to a solder ball at one end of the printed circuit board, wherein the solder ball at the end of the printed circuit board is connected to a testing
10 module used for testing the BGAs." (Amended Claim 1)

The Examiner has relied on Figure 3 of Maruyama. Maruyama in Figure 3 shows a testing socket 30A. This testing socket 30A is complex with a lid portion 34 that is rotatably supported on the body portion 32 by a shaft 36. This lid portion is locked in a closed position by a locking pin 38. (Maruyama, Col. 7, lines 57-65).

15 Applicant in paragraph [0003] of the patent application has highlighted the problem of testing sockets that are complex with various components. Maruyama appears to fall in this category. The apparatus disclosed in amended Claim 1 does not use a lid, shaft or locking pins. The apparatus instead uses a slot in a printed circuit board that receives a simple socket with plural holding members that support the BGA solder balls.

20 Therefore, Applicant respectfully submits that amended Claim 1 is patentably distinguished over Maruyama for at least the foregoing reasons. Therefore, Applicant respectfully requests allowance of amended Claim 1.

Claim 2:

The Examiner objected to Claim 2 because of informalities, stating:

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"In claim 2, it is unclear how the socket top is interrelated and associated with a socket. Furthermore, it is unclear whether plural prong like holding members are positively claimed since the term "may have" is indefinite." (Office Action, Page 2, lines 4-6).

5 Applicant has amended Claim 2 to indicate that the plural holding members are prong shaped. Applicant has also deleted the words "may have" from line 2 of Claim 2. Thus, Applicant respectfully submits that Claim 2 is no longer indefinite.

Applicant requests that the Examiner remove the objection of Claim 2 in light of the above-mentioned amendments.

10 The Examiner rejected Claim 2 under 35 U.S.C. § 102(b), stating that Maruyama discloses "the socket top (20) having a plural prong like members (24A)." (Office Action, Page 2, line 22).

Claim 2 depends from amended Claim 1 and is thus patentably distinguished over Maruyama for at least the same reasons provided above with respect to Claim 1. Therefore, Applicant
15 respectfully requests allowance of Claim 2.

Claim 5:

The Examiner indicated that Claim 4 is objected to because of an informality:

20 "In claim 4, it is unclear whether the holding members are etched on a BGA solder top. The term "may be" is indefinite. Appropriate correction is required." (Office Action Page 2, lines 7-8)

Applicant notes that Claim 4 has previously been cancelled. Applicant believes that the Examiner intended to object to Claim 5, for the reasons stated above, and Applicant has acted accordingly.

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Applicant has amended Claim 5 by replacing "may be" with "are" (line 1) and deleting "BGA" to more clearly describe the invention. Amended Claim 5 has been amended to depend upon Claim 1. These amendments are not made to avoid prior art.

Thus, Applicant respectfully submits that Claim 5 is no longer indefinite. Applicant requests that the Examiner remove the objection of Claim 5 in light of the above mentioned amendments.

The Examiner rejected Claim 5 under 35 U.S.C. § 102(b), stating that Maruyama discloses, "that the holding members (24a) are etched on the socket top (20)." (Office Action, Page 2, line 23).

Claim 5 depends from amended Claim 1 and is thus patentably distinguished over Maruyama for at least the same reasons provided above with respect to Claims 1. Therefore, Applicant respectfully requests allowance of Claim 5.

Claim 6:

The Examiner rejected Claim 6 under 35 U.S.C. § 102(b), stating that Maruyama discloses, "that the holding members (24a) are flexible to provide support for the solder balls (2)." (Office Action, Page 2, lines 24-25).

Claim 6 depends from amended Claim 1 and is thus patentably distinguished over Maruyama for at least the same reasons provided above with respect to Claims 1. Therefore, Applicant respectfully requests allowance of Claim 6.

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CONCLUSION

For the foregoing reasons, Applicant believes Claims 1-2 and 5-6 are allowable, and a notice of allowance is respectfully requested. If the Examiner has any questions regarding the application, the Examiner is invited to call the undersigned Attorney at (949)-389-6532.

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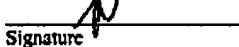
Dated: 05/19/05

Respectfully submitted,



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10 I hereby certify that this correspondence is being faxed to the USPTO, fax number 703-872-9306 on 05/19/05.


Signature

May 19, 2005

15 Attorney for Applicant(s) Date of Signature

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